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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,813	02/27/2004	Stefan Biedenstein	34874-084 UTIL	5651

64280 7590 02/16/2007	EXAMINER
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ART UNIT	PAPER NUMBER
2164	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
Office Action Summary	10/789,813	BIEDENSTEIN ET AL.
	Examiner	Art Unit	
	Cory C. Bell	2164	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>01 December 2006</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-18</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-18</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>15 November 2004</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

    1. ☐ Certified copies of the priority documents have been received.

    2. ☐ Certified copies of the priority documents have been received in Application No. _____.

    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

SAM RIMELL
PRIMARY EXAMINER

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-14 have been examined.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-16 rejected under 35 U.S.C. 102(b) as being anticipated by "Online Aggregation," known hereafter as Hellerstein.

    a.   *As per Claims 1 and 8,* they are rejected for the following reasons:

        i.   *Hellerstien teaches,* a data repository, wherein the data repository is configured to store a data set;[Introduction para 1] and a program for executing queries on the data repository,[Introduction para 3] wherein the program is operative to: receive a query, adapted for execution on a data set in the data repository; [Section 1.1 para 1] define a sample of the data set, wherein the sample is a subset of the data set;[Section 3.2.7] execute the query on the sample;[Section 3.2.7] generate an estimate of a result of the execution of the query, the estimate based on the execution of the the query on the sample;[Section 3.2.7]

providing the estimate to a user interface;{Section 3.2.7}

executing the query on another subset of the data set;(Section 3.2.7, the next k tuples)

generating an updated estimate of the result of the execution of the query based

on the execution of the query on the another subset; and

providing the updated estimate to the user interface.(Section 3.2.7)

b.   *As per Claims 2 and 9,* they are rejected for the following reasons:

A method of executing a query in accordance with claim 1, wherein the query

includes criteria to provide the result of the execution of the query. [Section 1.1]

c.   *As per Claims 3 and 10,* they are rejected for the following reasons:

A method of executing a query in accordance with claim 1, wherein providing the

estimate comprises displaying a representation of the estimate and results

matching the query [Figure 1]

d.   *As per Claims 4 and 11,* they are rejected for the following reasons:

ii.   *Lynch teaches,* A method of executing a query in accordance with claim 1,

the method further comprising: defining an Nth sample of the data set,(Section

3.2.7) wherein the Nth sample is larger than an (N-1) th sample(Section 3.2.7 the

sample size grows with the edition of each set of k new tuples); executing the

query on the Nth sample; generating an Nth estimate of the result based on the

execution of the query on the Nth sample;(Section 3.2.7)

e.   *As per Claims 5 and 12,* they are rejected for the following reasons:

5. (Original) A method of executing a query in accordance with claim 4, wherein

the Nth sample of the data set is defined if the query is neither modified nor

canceled after a preset time.(Section 2.1 para 2, section 3.2.7)

f.   *As per Claims 6 and 13,* they are rejected for the following reasons:

Section 3.2.7 shows that each the Nth sample grows by the factor of k to create the (N-1)th sample.

g.   *As per Claims 7 and 14,* they are rejected for the following reasons:

An information management system in accordance with claim 11, wherein the program is further operative to: if the Nth sample is greater than or equal to a size Z, execute the query on the data set to generate the result, and provide the result of the query execution to the user interface.(Section 3.2.7, also it is inherent that if the query reaches 100% the result is computer on the whole answer set)

As per Claims 15 and 16, they are rejected for the following reasons:

15. (New) A method of executing a query in accordance with claim 1 further comprising: continually performing the query on further subsets of data until the query has been executed on a threshold amount of the data set; and continually providing an updated estimate to the user interface. (Section 3.2.7 also it is inherent that if the query reaches 100% the result is computer on the whole answer set and completes)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 17 isrejected under 35 U.S.C. 103(a) as being unpatentable over Hellerstein, in

view of "pCube: Update-Efficient Online Aggrigation with Progressive Feedback and Error

Bounds," known hereafter as Riedewald.

As per Claim 17, it is rejected for the following reasons:

The claims upon which claim 17 is dependent are taught by Hellerstein as discussed

above. Although Hellerstein does express the desire to serve OLAP queries in section 6 and

recognize there advantages in section 1.3, Hellerstein fails to expressly disclose the use of his

system with OLAP queries. This feature is taught however in Riedewald on Page 2. Thus it

would have been obvious to one of ordinary skill in the art at the time of the invention to include

this feature as it provides the advantage of roll-up and drill-down capabilities.

As per Claim 18, it is rejected for the following reasons:

(New) A method comprising:

receiving a query, adapted for execution on a data set in a data repository,

{Hellerstien see claim 1 rejection} the data set comprising business data structured for online

analytical processing queries; {Riedewald see claim 17 rejection }

executing the query on a first subset of the data set; [Hellerstien Introduction para 3]

generating an estimate of a number of results matching the query,(Haas Page 342

Col 1 Para beginning on line 11) the estimate based on the executing the query on the first

subset;(Haas Page 342 Col 1 Para beginning on line 11, Hellerstien see claim 1 rejection)

providing the estimate to a user interface in coordination with the estimate being

generated;(Hellerstien see claim 1 rejection)

continually executing the query on another subset of the data set until a threshold

condition is met; (Hellerstien see claims 15 and 16 rejection, Haas Page 342 Col 1 Para

beginning on line 11)

generating updated estimates of a number of results matching the query in

coordination with each execution on the query, the updated estimates based on the continually

executing the query; (Hellerstien teaches this limitation excluding "of a number of results

matching the query" as shown in the claims 1 rejection above, Haas teaches this limitation in

Page 342 Col 1 the Para Beginning on line 11)

and providing the updated estimates to the user interface in coordination with each of

the updated estimates being generated. (Hellerstien see claim 1 rejection).

Although Hellerstein does express the desire to serve OLAP queries in section 6 and

recognize there advantages in section 1.3, Hellerstein fails to expressly disclose the use

of his system with OLAP queries. This feature is taught however in Riedewald on Page

2. Thus it would have been obvious to one of ordinary skill in the art at the time of the

invention to include this feature as it provides the advantage of roll-up and drill-down

capabilities.

Second Hellerstien fails to expressly disclose the estimate being of the number of sesults

matching the the query. This feature as well as name of the other feature are taught by

Haas as shown above. Thus it would have been advantageous to one of ordinary skill in

the are at the time of the invention to include these features in Hellerstien inoder for the

user to be able to indentify efficient plans for evaluating queries and many other

advantages as taught in the introduction of Haas.

Response to Arguments

Applicant's arguments with respect to claims 1-13 have been considered but are moot in

view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Cory C. Bell whose telephone number is (571) 272 2736. The

examiner can normally be reached on m-f 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272 4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SAM RIMELL
PRIMARY EXAMINER